

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In re Application of:**

Rohrbaugh et al.

**Serial No.:** 10/728,733

**Filed:** December 5, 2003

**For:** STEERABLE, INTERMITTENTLY  
OPERABLE ROCKET PROPULSION  
SYSTEM

**Confirmation No.:** 1717

**Examiner:** W. Rodriguez

**Group Art Unit:** 3746

**Attorney Docket No.:** 2507-6021US  
(22029-US)

**Notice of Allowance Mailed:**

May 22, 2007

**VIA ELECTRONIC FILING**

**AUGUST 8, 2007**

**COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE**

Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This communication is filed in response to the Notice of Allowance mailed May 22, 2007 and sets forth Applicants' comments, pursuant to 37 C.F.R. §1.104(e), on the Examiner's Statement of Allowable Subject Matter accompanying the Notice of Allowance.

In the Notice of Allowance, the Examiner indicates:

With respect to claim 1, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show "wherein the at least one axial thrust valve and the at least one maneuver control valve are operable in combination for simultaneous opening to rapidly reduce pressure within the pressure vessel to a degree sufficient to substantially extinguish combustion of the at least one solid propellant grain", in combination with the other claim limitations.

With respect to claim 25, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show "wherein the plurality of valves comprises at least one valve in communication with a thruster for providing axial thrust and at least two valves in respective communication with thrusters for providing thrust for maneuvering and opening the plurality of valves to rapidly reduce pressure within the pressure vessel to a degree sufficient to substantially extinguish combustion of the solid propellant", in combination with the other claim limitations.

With respect to claim 29, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show "wherein the at least one valve and the valves of the plurality are operable to open fully in combination to cause rapid depressurization of the interior of the pressure vessel to substantially extinguish combustion of the at least one solid propellant charge", in combination with the other claim limitations.

With respect to claim 40, the following is an examiners statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show "at least another solid pulse grain disposed within the pressure vessel, separated from the first pulse grain by a flame-inhibiting barrier and having at least one pulse igniter associated therewith", in combination with the other claim limitations.

With respect to claim 42, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show "wherein the axial thrust valve and the plurality of maneuver control valves are configured to effect a rapid depressurization of the pressure vessel during combustion of the solid propellant charge to substantially extinguish combustion thereof when the axial thrust valve and the plurality of maneuver control valves are fully open", in combination with the other claim limitations.

With respect to claim 50, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show "at least one maneuver control valve in communication with the pressure vessel and configured for selectively releasing gases generated by combustion of the propellant within the pressure vessel to provide thrust for maneuvering, wherein the pressure vessel, the at least one axial thrust valve, and the at least one maneuver control valve are disposed within a common housing", in combination with the other claim limitations.

With respect to claim 51, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show "a plurality of selectively operable maneuver control valves for release of the combustion gases from the pressure vessel, wherein the axial thrust valve is configured for modulation of a flow area therethrough to compensate for temperature effects to provide substantially constant axial thrust", in combination with the other claim limitations.

Applicants concur with the reasons as stated by the Examiner insofar as they comprise a summary, which is exemplary and not limiting. However, the scope of the claims is based on the actual language of the claims and equivalents thereof, and not on a paraphrase or summary of the claim language.

The Independent claims as allowed recite features and methodology in addition to, and in different language than, those described in the Statement of Allowable Subject Matter. Furthermore, the dependent claims recite elements in addition to those of the independent claims, which are also not reflected in the Statement of Allowable Subject Matter. Such additional elements, in combination with those of the independent claims from which each claim depends, provide additional reasons for patentability. Accordingly, the scope of the claims must be determined from the literal language of each as a whole, as well as all equivalents thereof.

Therefore, to the extent that the Examiner's reasons for allowance as stated are not relevant to, or wholly encompassing of, a particular claim, independent or dependent, Applicants assume that (pursuant to 37 C.F.R. §1.104(e)) the Examiner has determined that the record of the prosecution as a whole of the application makes clear the reasons for allowing those claims.

Further, it appears, pursuant to M.P.E.P. 1302.14, that the Examiner's Statements of Allowable Subject Matter are not intended to encompass all of the reasons for allowance.

Respectfully submitted,



Kirsten L. Dockstader  
Registration No. 54,597  
Attorney for Applicant(s)  
TRASKBRITT  
P.O. Box 2550  
Salt Lake City, Utah 84110-2550  
Telephone: 801-532-1922

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